IN THE CLAIMS

Applicant has requested amendment to claims 15, 19, 23, 27, 30, 33 and 36, a copy of each of these claims being presented herein. A marked-up version of these claims entitled "Version With Markings Showing Changes Made" indicating insertions and deletions is included as an attachment to this amendment.

Please amend claims 15, 19, 23, 27, 30, 33 and 36 as follows:

15. (Six Times Amended) A digital signal conversion apparatus for converting a first digital image signal to a second digital image signal having a high resolution component, comprising:

a memory for storing class data for respective classes at addresses corresponding to said respective classes, said class data obtained by learning with at least a training digital image signal having said high resolution component;

means for receiving said first digital image signal including pixel data representing pixel values;

means for clustering a plurality of pixel data of said first digital image signal adjacent to a pixel data of said second digital image signal to produce a class, a bit number of said pixel data of said first digital image signal being reduced;

means for retrieving said class data from one of said addresses of said memory corresponding to said class of said first digital image signal; and

means for generating all of pixel data, representing pixel values of said second digital image signal, in the same manner in accordance with a common algorithm based upon at least

said retrieved class data.

19. (Six Times Amended) A digital signal data conversion method for converting a first

digital image signal to a second digital image signal having a high resolution component,

comprising the steps of:

storing class data for respective classes at addresses in a memory corresponding to said

respective classes, said class data obtained by learning with at least a training digital image

signal having said high resolution component;

receiving said first digital image signal including pixel data representing pixel values;

clustering a plurality of pixel data of said first digital image signal adjacent to a pixel data

of said second digital image signal to produce a class, a bit number of said pixel data of said first

digital image signal being reduced;

retrieving said class data from one of said addresses of said memory corresponding to

said class of said first digital video signal; and

generating all of pixel data, representing pixel values of said second digital image signal,

in the same manner in accordance with a common algorithm based upon at least said retrieved

class data.

23. (Six Times Amended) A digital signal conversion apparatus for converting a digital

video signal admitting of a first standard into a digital video signal admitting of a second

standard, a first resolution of said digital video signal admitting of said first standard being lower

than a second resolution of said digital video signal admitting of said second standard,

comprising:

a memory for storing class data for respective classes at addresses corresponding to said respective classes, said class data obtained by learning with at least a training digital video signal admitting of said second standard having said second resolution;

means for receiving an input digital video signal including pixel data and admitting of said first standard;

means for clustering a plurality of pixel data of said input digital video signal adjacent to a pixel data of a digital video signal admitting of said second standard to produce a class, a bit number of said pixel data of said input digital video signal being reduced;

means for retrieving said class data from one of said addresses of said memory corresponding to said class of said input digital video signal admitting of said first standard; and

means for generating all of pixel data, representing pixel values of said digital video signal admitting of said second standard, in the same manner in accordance with a common algorithm based upon at least said class data which has been retrieved.

27. (Six Times Amended) A digital signal conversion apparatus for converting a standard definition digital video signal to a high definition digital video signal, comprising:

a memory for storing class data for respective classes at addresses corresponding to said respective classes, said class data obtained by learning with at least a training high definition video signal;

means for receiving a standard definition digital video signal having pixel data representing pixel values;

means for clustering a plurality of pixel data of said standard definition digital video signal adjacent to a pixel data of said high definition digital video signal to produce a

class, a bit number of said pixel data of said standard definition digital video signal being reduced;

means for retrieving said class data from one of said addresses of said memory corresponding to said class of said standard definition digital video signal; and

means for generating all of pixel data, representing pixel values of said high definition digital video signal, in the same manner in accordance with a common algorithm based upon at least said retrieved class data.

30. (Six Times Amended) A digital signal conversion method, comprising the steps of:

storing class data for respective classes at addresses in a memory corresponding to said respective classes, said class data obtained by learning with at least a training high definition digital video signal;

receiving a standard definition digital video signal having pixel data representing pixel values;

clustering a plurality of pixel data of said standard definition digital video signal adjacent to a pixel data of a high definition digital video signal to produce a class, a bit number of said pixel data of said standard definition digital video signal being reduced;

retrieving said stored class data from one of said addresses corresponding to said class of said standard definition digital video signal; and

generating all of pixel data, representing pixel values of said high definition digital video signal, in the same manner in accordance with a common algorithm based upon at least said retrieved class data.

33. (Six Times Amended) A digital data conversion apparatus for converting a first digital image signal to a second digital image signal having a high resolution component, comprising:

a memory for storing class data for respective classes at addresses corresponding to said respective classes, said class data obtained by learning with at least a training digital image data having said high resolution component;

means for receiving said first digital image signal including pixel data representing pixel values;

means for clustering a plurality of pixel data of said first digital image signal adjacent to a plurality of pixel data of said second digital image signal to produce a class, a bit number of said pixel data of said first digital image signal being reduced and said class being used to retrieve a class data to generate a plurality of pixel data representing pixel values of said second digital image signal;

means for retrieving said class data from addresses of said memory corresponding to said class of said first digital image signal; and

means for generating all of said pixel data, representing pixel values of said second digital image signal, in the same manner in accordance with a common algorithm based upon at least said retrieved class data.

36. (Six Times Amended) A digital data conversion method for converting a first digital

image signal to a second digital image signal having a high resolution component, comprising

the steps of:

storing class data for respective classes at addresses in a memory corresponding to said

respective classes, said class data obtained by learning with at least a training digital image data

having said high resolution component;

receiving said first digital image signal including pixel data representing pixel values;

clustering a plurality of pixel data of said first digital image signal adjacent to a plurality

of pixel data of said second digital image signal to produce a class, a bit number of said pixel

data of said first digital image signal being reduced and said class being used to retrieve a class

data to generate a plurality of pixel data representing pixel values of said second digital image

signal;

retrieving said class data from addresses of said memory corresponding to said class of

said first digital image signal; and

generating all of said pixel data, representing pixel values of said second digital image

signal, in the same manner in accordance with a common algorithm based upon said retrieved

class data.